

ABSTRACT OF THE DISCLOSURE

Methods are disclosed for selecting a combination of nucleic acid sample pairs for evaluating the ability of an oligonucleotide probe to measure differential expression of genes. Differential gene expression experiments are conducted using (i) nucleic acid sample pairs and (ii) nucleic acid probes immobilized on a substrate, the probes representing a set of genes. The number of genes in the set is a portion of an expected number of genes in a sample. A nucleic acid sample pair combination is selected based on the members of the combination having a maximized number of genes from the set of genes that exhibit differential expression and a minimized number of the genes that do not exhibit differential expression.